

SK140HD LC *Super X*

STANDARD EQUIPMENT

ENGINE

Engine, MITSUBISHI D04F, Diesel engine with turbocharger and intercooler
Automatic engine deceleration
Auto Idle Stop (AIS)
Removable clean-out screen for radiator
Automatic engine shut-down for low engine oil pressure
Engine oil pan drain valve
Double element air cleaner
Pre-air cleaner

CONTROL

Working mode selector (H-mode and S-mode)
Power Boost

SWING SYSTEM & TRAVEL SYSTEM

Swing rebound prevention system
Straight propel system
Two-speed travel with automatic shift down
Sealed & lubricated track links
Grease-type track adjusters
Automatic swing brake

HYDRAULIC

Arm regeneration system
Aluminum hydraulic oil cooler

MIRRORS & LIGHTS

Two rearview mirrors
Four front working lights
Swing flasher

CAB & CONTROL

Two control levers, pilot-operated
Tow eyes
Horn, electric
Integrated left-right slide-type control box
Cab, all-weather sound suppressed type
Cab light (interior)
Coat hook
Luggage tray
Large cup holder
Detachable two-piece floor mat
Double slide seat
Retractable seatbelt
Headrest
Handrails
Heater and defroster
Intermittent windshield wiper with double-spray washer
Skylight
Tinted safety glass
Pull-type front window and removable lower front window
Easy-to-read multi-display monitor
Automatic air conditioner
Emergency escape hammer

OPTIONAL EQUIPMENT

Wide range of buckets
Various optional arms
Wide range of shoes
Additional hydraulic circuit

Note: Standard and optional equipment may vary. Consult your KOBELCO dealer for specifics.

KOBELCO

ACERA Hydraulic Excavators

GEOSPEC

Super X

SK140HD LC

Bucket Capacity:

0.6 – 0.7m³ ISO heaped

Engine Power:

69.2 kW/2,000 min⁻¹ (ISO 9249)

74 kW/2,000 min⁻¹ (ISO 14396)

Operating Weight:

13,100 kg



We Save You Fuel
Achieving a Low-Carbon Society

Announcing ACERA GEOSPEC and the Concept of Beautiful Performance.

The Power Wave of Change

When we set out to design our new hydraulic excavators, we kept our eyes on the big picture.

Of course we wanted machines with greater digging capacity.

But they also had to be fuel-efficient and economical, while imposing less of a burden on the local and global environments.

Applying our advanced technologies,

we developed KOBELCO's new ACERA GEOSPEC series, an entirely new kind of excavator that beautifully balances all the demands of today's construction industry.

Lean and efficient with capacity to spare,

these sleek powerhouses bring a whole new style to the worksite while setting new standards for environmental responsibility.

Sturdy Construction & Built-in Durability ▶

Efficient Performance ▶

Easy Maintenance ▶

Comfort and Safety ▶



Pursuing the "Three E's"

The Perfection of Next-Generation, Network Performance

Enhancement

Greater Performance Capacity

- New hydraulic circuitry minimizes pressure loss
- High-efficiency, electronically controlled Common Rail Fuel Injection Engine
- Powerful travel and arm/bucket digging force
 - Sturdy Construction
- GEOSCAN Remote Monitoring System

Economy

Improved Cost Efficiency

- Advanced power plant that reduces fuel consumption
- Easy maintenance that reduces upkeep costs
- High structural durability and reliability that retain machine value longer

Environment

Features That Go Easy on the Earth

- Meets the latest exhaust emission standards
 - Auto Idle Stop as standard equipment
- Noise reduction measures (with improvement of the sound quality) minimize noise and vibration



ACERA
GEOSPEC ACERA GEOSPEC

The "GEO" in GEOSPEC expresses our deep respect for our planet, and for the solid ground where excavators are in their element. This is accompanied by SPEC, which refers to the performance specifications needed to get the job done efficiently as we carry on the tradition of the urban-friendly ACERA series.

Sturdy Construction & Built-in Durability

Stable Attachment Strength

Forged and cast components are used throughout. The arm tip's cross-sectional coefficient is 15 % higher than previous models, giving the arm the same strength as the 3-faced reinforced arm that was offered only as an option before. The strength of the boom foot has also been increased by 18 %.

Enhanced Upper Carbody Strength

The structure of the lower portion of the upper frame has been reassessed and the undercover area has been minimized. Also, the side deck's cross-sectional strength has been boosted by 50 %.

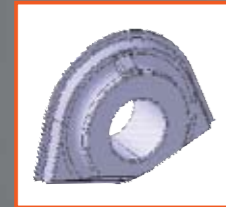
Durability That Retains Machine Value Five and Ten Years in the Future

- Improved heat resistance in the swing motor, cylinders and other hydraulic components
- New operator's seat covered in durable material
- High-quality urethane paint
- Easily repaired bolted hand rails

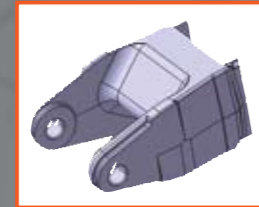
Rock guard (optional)



Forged steel arm foot boss



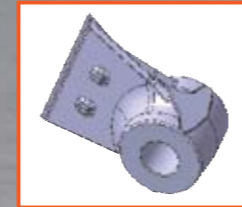
Integrated cast steel boom top



Reinforced boom center boss



Cast steel boom foot boss



Pre-air cleaner



Reinforced upper and lower frames

The front section of the upper frame and the entire lower frame are constructed of thicker steel plate. As a result, the durability of the machine body is higher than other KOBELCO machines in the 13 ton class.

Reinforced Crawler Shoes

The diameter of the track link pins has been made a size larger for even greater strength.



Durable forged steel shoe

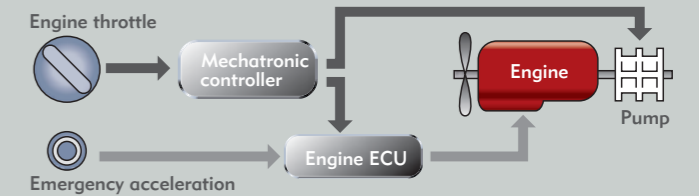


Stronger casing for travel motor

Emergency Acceleration (Dial) Permits Continued Operation in the Unlikely Event of Malfunction



If unexpected trouble is experienced with the ITCS mechatronic control system, the machine can still be operated using the emergency acceleration system. Digging modes are also automatically relayed to an emergency system so that digging can continue temporarily until a service person arrives to repair the primary system.



Newly designed MCU



New MCU Conventional MCU

- Vertical alignment and sealed cover gives better protection from water and dust
- Integration in base plate boosts assembly quality
- Reliable fixture to base plate



Countermeasures Against Electrical System Failure

All elements of the electrical system, including controller, have been designed for enhanced reliability.



Efficient Performance

Amazing Productivity with 10% Saving in Fuel Consumption and Top-Class Cost Performance

| | |
|---|---|
|  | Fuel Consumption* 10% improvement in fuel efficiency when performing more work volume (S-Mode) |
|  | Work Volume* 3% increase in work volume using the same amount of fuel. (H-Mode) |

"Top-Class" Powerful Digging

| | |
|----------------------------|-----------------------|
| Max. arm crowding force: | 71.9kN {7.3tf} |
| Max. bucket digging force: | 89.2kN {9.1tf} |

Powerful Travel

| | |
|------------------------|-----------------------|
| Travel speed: | 5.6/3.4km/h |
| Drawbar pulling force: | 139kN {14.2tf} |

Greater Swing Power, Shorter Cycle Times

| | |
|---------------|-----------------------------|
| Swing torque: | 39.9kN |
| Swing speed: | 11.0min⁻¹ |

Significant Extension of Continuous Working Hours

The combination of a large-capacity fuel tank and excellent fuel efficiency delivers an impressive 37% increase in continuous operation hours.

| | |
|------------|--|
| Fuel tank: | 37%  |
|------------|--|

Light Lever Operation

It takes 10% less effort to move the control levers, so that operators can work longer hours with less fatigue.

10%Less



*The value shows results from actual measurements taken by KOBELCO when compared with previous KOBELCO models.

NEXT-3E Technology

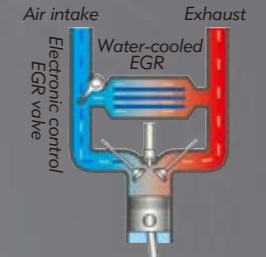
New Hydraulic System

Rigorous inspections for pressure loss are performed on all components of the hydraulic piping, from the spool of the control valve to the connectors. This regimen, combined with the use of a new, high-efficiency pump, cuts energy loss to a minimum.

NEXT-3E Technology

Next-Generation Electronic Engine Control

The high-pressure, common-rail fuel-injection engine features a cooled EGR (Exhaust Gas Recirculation) device that lowers the air intake temperature to keep the oxygen concentration down.



NEXT-3E Technology

Total Tuning Through Advanced ITCS Control

The next-generation engine control is governed by a new version of ITCS, which responds quickly to sudden changes in hydraulic load to ensure that the engine runs as efficiently as possible with a minimum of wasted output.

ITCS (Intelligent Total Control System) is an advanced, computerized system that provides comprehensive control of all machine functions.

Simple Select: Two Digging Modes

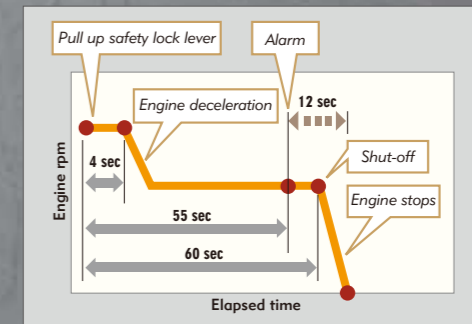
| | |
|------------------|---|
| H Mode | For heavy duty when a higher performance level is required. |
| S Mode | For normal operations with lower fuel consumption. |

Optional N&B (crusher and breaker)

The operator selects the desired mode from inside the cab, and the selector valve automatically configures the machine accordingly.



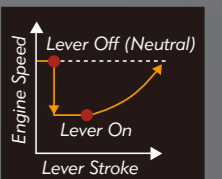
Auto Idle Stop Provided as Standard Equipment



This function saves fuel and cuts emissions by shutting down the engine automatically when the safety lock lever is pulled up. It also stops the hourmeter, which helps to retain the machine's asset value.

Automatic Acceleration/Deceleration Function Reduces Engine Speed

Engine speed is automatically reduced when the control lever is placed in neutral, effectively saving fuel and reducing noise and exhaust emissions. The engine quickly returns to full speed when the lever is moved out of neutral.



Easy Maintenance

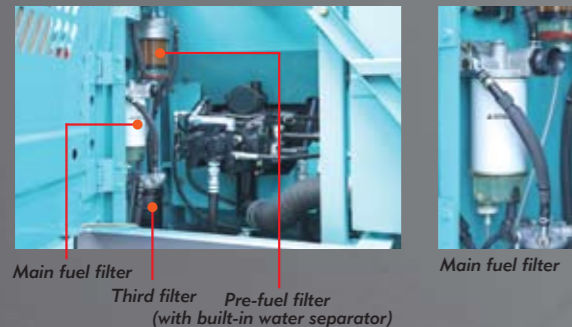
Comfortable "On the Ground" Maintenance



The machine layout was designed with easy inspection and maintenance in mind.

Access Through the Right Side Cover ▶▶▶▶▶▶▶▶

A new fuel filter has been installed in a convenient, readily accessible location. It now has two pre-fuel filters (with built-in water separator), and a high-efficiency main fuel filter.



Quick Oil Drain Valves for Quick Maintenance

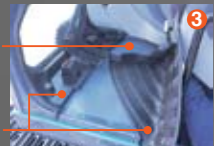


A quick drain valve, which requires no tools, is provided as standard equipment.



To facilitate fuel tank cleaning, the fuel drain valve was made larger and fitted with a flange on the bottom.

More Efficient Maintenance Inside the Cab



Detachable two-piece floor mat with handles for easy removal.



Easy-access fuse box.



Air conditioner filter can be easily removed.



Hour meter can be checked while standing on the ground.



Large-capacity tool box.



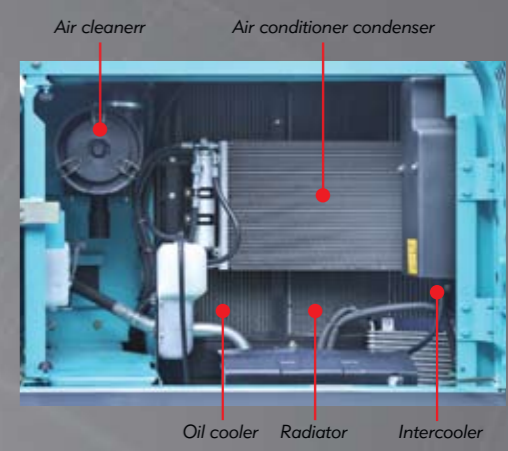
Pre-air Cleaner

The pre-air cleaner prolongs a replacement cycle of main air cleaner.



◀◀◀◀◀◀ Access Through the Left Side Cover

Parallel Cooling Units Are Easy to Clean



Highly Durable Super-fine Filter

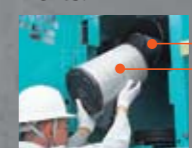
The high-capacity hydraulic oil filter incorporates glass fiber with superior cleaning power and durability. With a replacement cycle of 1,000 hours and a construction that allows replacement of the filter element only, it's both highly effective and highly economical.



Super-fine filter

Double-Element Air Cleaner as Standard

The large-capacity element features a double-filter structure that keeps the engine running clean even in dusty environments.



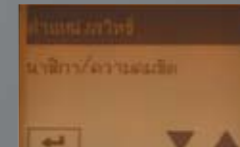
Air cleaner (double element)

Monitor Display with Essential Information for Accurate Maintenance Checks



- Displays only the maintenance information that's needed, when it's needed.
- Self-diagnostic function that provides early-warning detection and display of electrical system malfunctions.
- Record previous breakdowns, including irregular and transient malfunctions.

Choice of 16 Languages for Monitor Display



With messages including those requiring urgent action displayed in the local language, users in all parts of the world can work with greater peace of mind.



Remote Monitoring for Peace of Mind



GEOSCAN is the remote monitoring system for Acera Geospec series excavators. When a hydraulic excavator is fitted with this system, data on the machine's operation, such as operating hours, location, fuel consumption, and maintenance status can be obtained remotely.

Direct Access to Operational Status

Location Data

Accurate location data can be obtained even from sites where communications are difficult.

Fuel Consumption Data

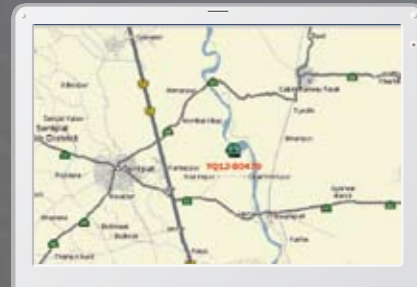
Data on fuel consumption and idling times can be used to indicate improvements in fuel consumption.

Maintenance Data and Warning Alerts

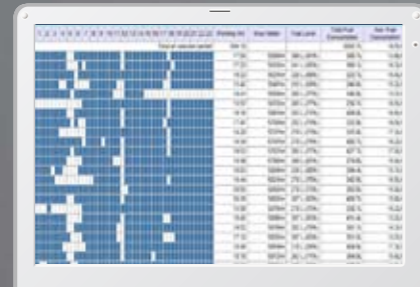
Machine Maintenance Data

Provides maintenance status of separate machines operating at multiple sites.

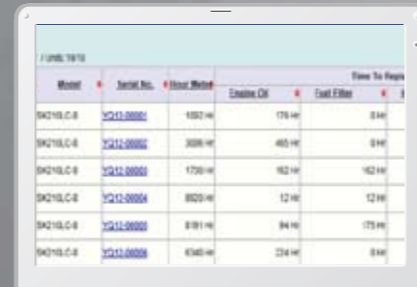
Maintenance data is also relayed to KOBELCO service personnel, for more efficient planning of periodic servicing.



Latest location



Fuel consumption



Maintenance

Operating Hours

A comparison of operating times of machines at multiple locations shows which locations are busier and more profitable. Operating hours on site can be accurately recorded, for running time calculations needed for rental machines, etc.

Graph of Work Content

The graph shows how working hours are divided among different operating categories, including digging, idling, traveling and optional operations (N&B).

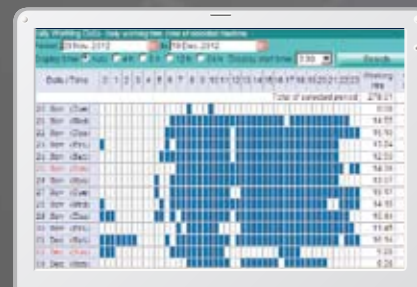
Security System

Engine Start Alarm

The system can be set an alarm if the machine is operated outside designated time.

Area Alarm

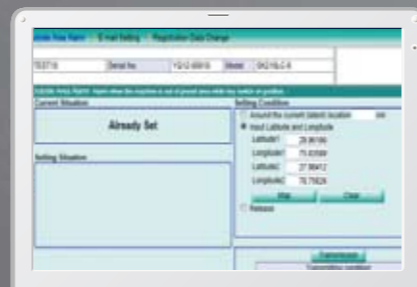
It can be set an alarm if the machine is moved out of its designated area to another location.



Daily report



Work status



Alarm for outside of reset area

Engine

| Model | MITSUBISHI D04FR |
|---------------------|---|
| Type: | Direct injection, water-cooled, 4-cycle diesel engine with turbocharger, intercooler |
| No. of cylinders: | 4 |
| Bore and stroke: | 102 mm X 130 mm |
| Displacement: | 4,249 L |
| Rated power output: | 74 kW/ 2,000 min ⁻¹ (ISO14396:2002) 69.2 kW/2,000 min ⁻¹ (ISO9249:2007) |
| Max. torque: | 375 N-m/1,600 min ⁻¹ (ISO14396:2002) 359 N-m/1,600 min ⁻¹ (ISO9249:2007) |

Hydraulic System

| Pump | |
|-----------------------|---|
| Type: | Two variable displacement pumps + 1 gear pump |
| Max. discharge flow: | 2 X 130 L/min, 1 X 20 L/min |
| Relief valve setting | |
| Boom, arm and bucket: | 34.3 MPa (350 kgf/cm ²) |
| Travel circuit: | 34.3 MPa (350 kgf/cm ²) |
| Swing circuit: | 28.0 MPa (285 kgf/cm ²) |
| Control circuit: | 5.0 MPa (50 kgf/cm ²) |
| Pilot control pump: | Gear type |
| Main control valves: | 8-spool |
| Oil cooler: | Air cooled type |

Swing System

| | |
|--------------------------|--|
| Swing motor: | Axial-piston motor |
| Brake: | Hydraulic; locking automatically when the swing control lever is in the neutral position |
| Parking brake: | Hydraulic disc brake |
| Swing speed: | 11.0 min ⁻¹ (rpm) |
| Tail swing radius: | 2,190 mm |
| Min. front swing radius: | 2,620 mm |

Attachments

Backhoe bucket and combination

| Use | Backhoe bucket | |
|---------------------|---------------------|----------------|
| | ISO heaped | Normal digging |
| Bucket capacity | 0.6 m ³ | 0.7 |
| Struck | 0.43 m ³ | 0.5 |
| Opening width | With side cutter | 1,100 |
| | Without side cutter | 1,000 |
| No. of bucket teeth | 5 | 5 |
| Bucket weight | 410 kg | 550 |
| 2.09 m short arm | ○ | □ |

○ Recommended □ Earth work digging

Travel System

| | |
|------------------------|-----------------------------------|
| Travel motors: | 2 X axial-piston, two-step motors |
| Travel brakes: | Hydraulic disc brake |
| Parking brakes: | Oil disc brake per motor |
| Travel shoes: | 46 each side |
| Travel speed: | 5.6/3.4 km/h |
| Drawbar pulling force: | 139 kN (14.2 tf) (ISO 7464) |
| Gradeability: | 70 % (35°) |
| Ground clearance: | 440 mm |

Cab & Control

| Cab | |
|--|--|
| All-weather, sound-suppressed steel cab mounted on the silicon-sealed viscous mounts and equipped with a heavy, insulated floor mat. | |
| Control | |
| Two hand levers and two foot pedals for travel | |
| Two hand levers for excavating and swing | |
| Electric rotary-type engine throttle | |

Boom, Arm & Bucket

| | |
|------------------|-------------------|
| Boom cylinders: | 100 mm X 1,092 mm |
| Arm cylinder: | 115 mm X 1,120 mm |
| Bucket cylinder: | 95 mm X 903 mm |

Refilling Capacities & Lubrications

| | |
|------------------------|--|
| Fuel tank: | 275 L |
| Cooling system: | 14 L |
| Engine oil: | 18.5 L |
| Travel reduction gear: | 2 X 2.1 L |
| Swing reduction gear: | 1.65 L |
| Hydraulic oil tank: | 101 L tank oil level 172 L hydraulic system |



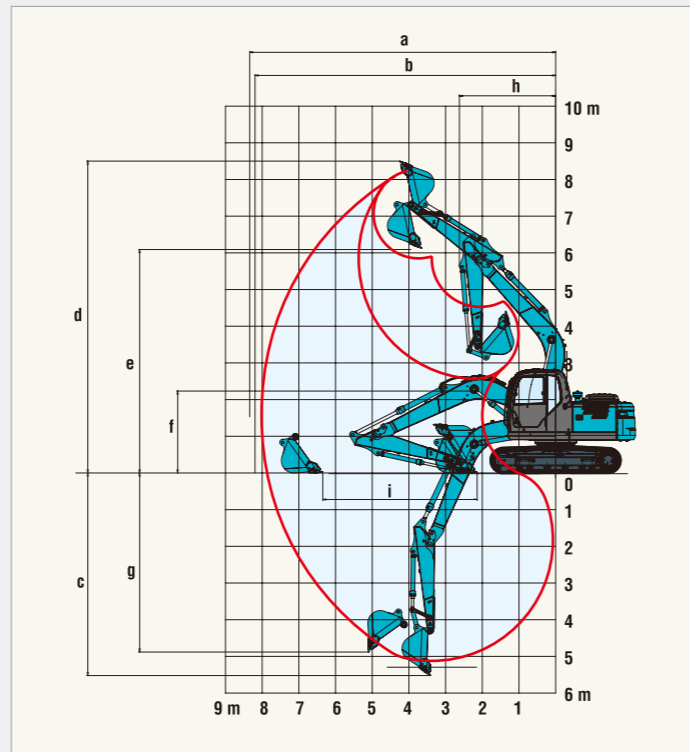


Working Ranges

| | |
|---|--------------|
| Boom | 4.68 m |
| Arm | Short 2.09 m |
| Range | |
| a - Max. digging reach | 8.04 |
| b - Max. digging reach at ground level | 7.89 |
| c - Max. digging depth | 5.23 |
| d - Max. digging height | 8.27 |
| e - Max. dumping clearance | 5.85 |
| f - Min. dumping clearance | 2.53 |
| g - Max. vertical wall digging depth | 4.68 |
| h - Min. swing radius | 2.61 |
| i - Horizontal digging stroke at ground level | 2.45 |
| Bucket capacity ISO heaped m ³ | 0.6 |

Digging Force (ISO 6015) Unit: kN (tf)

| | |
|----------------------|--------------|
| Arm length | Short 2.09 m |
| Bucket digging force | 89.2 (9.1) |
| Arm crowding force | 71.9 (7.3) |



Short Arm

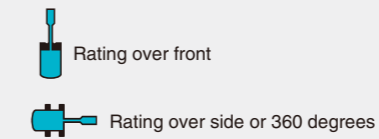
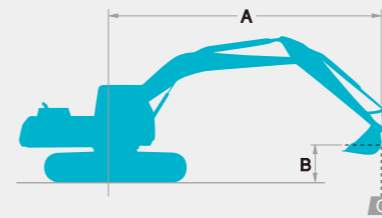
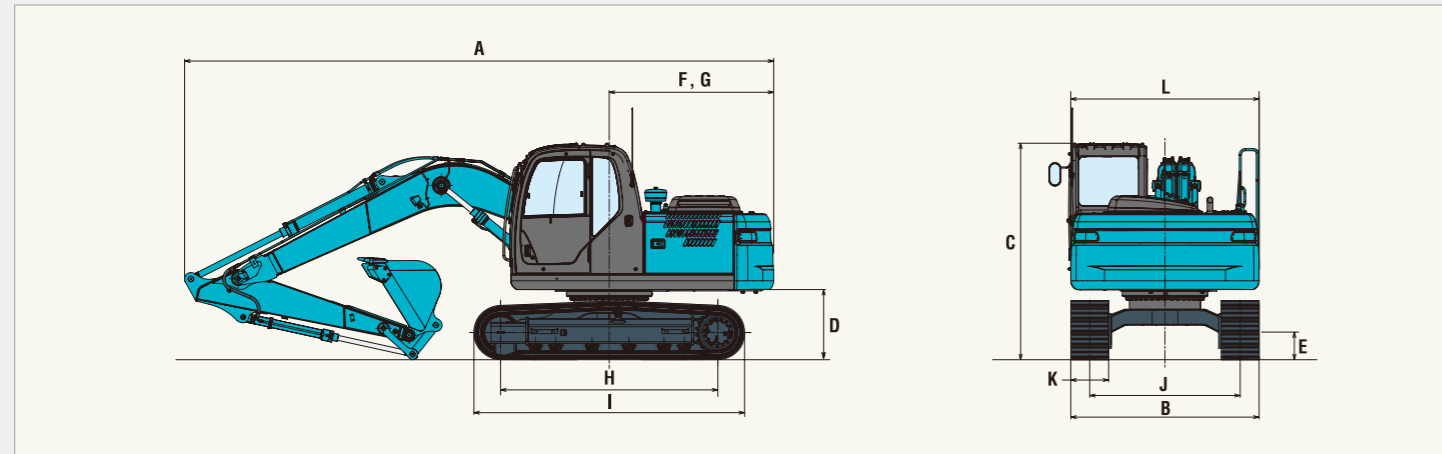


Dimensions

| | |
|----------------------------------|--------------|
| Arm length | Short 2.09 m |
| A Overall length | 7,510 |
| B Overall width | 2,490 |
| C Overall height (to top of cab) | 2,870 |
| D Ground clearance of rear end* | 910 |
| E Ground clearance* | 440 |
| F Tail swing radius | 2,190 |

| | |
|---|-------|
| G Distance from center of swing to rear end | 2,180 |
| H Tumbler distance | 3,040 |
| I Overall length of crawler | 3,750 |
| J Track gauge | 1,990 |
| K Shoe width | 500 |
| L Overall width of upperstructure | 2,490 |

* Without including height of shoe lug.



A - Reach from swing centerline to bucket hook
 B - Bucket hook height above/below ground
 C - Lifting capacities in kilograms
 • Max. discharge pressure: 34.3 MPa (350 kg/cm²)

| SK140HDLC | | Short Arm: 2.09 m Bucket: 0.6 m ³ ISO heaped 410 kg Shoe: 500 mm | | | | | | | | | | |
|-----------|----|---|--------|--------|-------|--------|--------|--------|-------|---------------|--------|--------|
| A | | 1.5 m | | 3.0 m | | 4.5 m | | 6.0 m | | At max. reach | | Radius |
| B | | | | | | | | | | | | |
| 6.0 m | kg | | | | | *2,950 | *2,950 | | | *1,810 | *1,810 | 5.20 m |
| 4.5 m | kg | | | | | *3,220 | *3,220 | *2,500 | 1,940 | *1,730 | *1,730 | 6.22 m |
| 3.0 m | kg | | | *5,950 | 5,890 | *4,050 | 3,040 | 3,090 | 1,860 | *1,790 | 1,490 | 6.75 m |
| 1.5 m | kg | | | *6,900 | 5,070 | 4,740 | 2,760 | 2,960 | 1,750 | *1,990 | 1,370 | 6.91 m |
| G.L. | kg | | | *7,020 | 4,840 | 4,540 | 2,580 | 2,870 | 1,660 | 2,390 | 1,380 | 6.72 m |
| -1.5 m | kg | *5,890 | *5,890 | *8,760 | 4,850 | 4,480 | 2,530 | 2,840 | 1,640 | 2,720 | 1,570 | 6.17 m |
| -3.0 m | kg | *9,310 | *9,310 | *7,470 | 5,000 | 4,550 | 2,600 | | | 3,720 | 2,150 | 5.11 m |

Notes:

- Do not attempt to lift or hold any load that is greater than these lift capacities at their specified lift point radius and heights. Weight of all accessories must be deducted from the above lift capacities.
- Lift capacities are based on machine standing on level, firm, and uniform ground. User must make allowance for job conditions such as soft or uneven ground, out of level conditions, side loads, sudden stopping of loads, hazardous conditions, experience of personnel, etc.
- Bucket lift hook defined as lift point.
- The above lifting capacities are in compliance with ISO 10567. They do not exceed

- 87% of hydraulic lifting capacity or 75% of tipping load. Lifting capacities marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.
- Operator should be fully acquainted with the Operator's and Maintenance Instructions before operating this machine. Rules for safe operation of equipment should be adhered to at all times.
 - Lift capacities apply to only machine as originally manufactured and normally equipped by KOBELCO CONSTRUCTION MACHINERY CO., LTD.
 - The above figures indicate machine capacity, but in practice the machine should not be used for lifting loads.



Operating Weight & Ground Pressure

In standard trim, with short boom, 2.09 m arm, and 0.6 m³ ISO heaped bucket

| | | | |
|------------------|----------------------------|------------------------------------|--|
| Shaped | | Triple grouser shoes (even height) | |
| Shoe width | mm | 500 | |
| Overall width | mm | 2,490 | |
| Ground pressure | kPa (kgf/cm ²) | 39 (0.40) | |
| Operating weight | kg | 13,100 | |